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Inform Asia: USAID's Health Research Program

Associate Award 2 Annual Report

September 24, 2015–September 30, 2016

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Cooperative Agreement Number: AID-486-LA-15-00002

Activity Start Date and End Date: September 24, 2015 to September 23, 2018

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List of Acronyms and Abbreviations

BVBD	Bureau of Vector Borne Diseases
CBA	cost benefit analysis
CMPE	Center for Malaria, Parasitology and Entomology
COP	chief of party
DDC	Department of Disease Control
eMIS	electronic Malaria Information System
GFATM	Global Fund to Fight AIDS Tuberculosis and Malaria
IT	information technology
M&E	monitoring and evaluation
MIS	Malaria Information System
MOPH	Ministry of Public Health (Thailand)
NMCP	National Malaria Control Program
PDR	People's Democratic Republic
Q	quarter
RDMA	Regional Mission for Development for Asia
TES	therapeutic efficacy studies
USAID	U.S. Agency for International Development
VBDC	Vector Borne Diseases Center
VBDU	Vector Borne Disease Unit
WHO	World Health Organization

1. Program Overview/Summary

Program Name:	Inform Asia: USAID's Health Research Program Associate Award 2
Activity Start Date and End Date:	September 24, 2015–September 23, 2018
Name of Prime Implementing Partner:	RTI International
Contract/Agreement Number:	Associate Cooperative Agreement No. AID-486-LA-15-00002
Geographic Coverage:	Thailand and Lao People's Democratic Republic
Reporting Period:	Year 1: September 24, 2015–September 30, 2016

1.1 Program Description/Introduction

Under the Leader with Associates Cooperative Agreement, Inform Asia was awarded a second Associate Award for technical assistance in malaria by the US Agency for International Development's (USAID's) Regional Development Mission for Asia (RDMA). The period of performance for Inform Asia's Associate Award 2 is from September 24, 2015, to September 23, 2018. Following the de-scoping of Inform Asia's Leader with Associates Award in April 2016, a revised program description for Associate Award 2 was submitted and approved on June 1, 2016 by USAID/RDMA. Following the approval of the revised program description, the revised work plan was submitted on June 30, 2016 and resubmitted October 17 following further revisions. It has now been approved. The revised Monitoring and Evaluation Plan will be submitted October 31, 2016.

Associate Award Goal

Although Thailand and Lao People's Democratic Republic (PDR) have been successful in developing strategic national plans and have both made great progress in curbing malaria morbidity and mortality, there is still a substantial need for consolidating a response plan to achieve malaria elimination. The activities carried out under Associate Award 2 aim to provide high quality technical assistance in malaria surveillance and to generate, use, and document strategic information and evidence for the National Malaria Control Programs (NMCPs) in Thailand and Lao PDR to support both countries in achieving malaria elimination—a cornerstone toward a malaria-free Thailand by 2024 and Lao PDR by 2030. In the revised work plan approved for Year 1, Associate Award 2, has three objectives and six key activities:

Objective 1. Strengthen malaria surveillance systems in Thailand and Lao PDR

- 1.1. Increase collaborative partnerships and contribute to existing malaria stakeholder committees and working groups (Lao PDR and Thailand)
- 1.2. Conduct a work plan consultation of malaria surveillance systems (Lao PDR and Thailand)
- 1.3. Secondment of national consultants to support malaria surveillance activities and build local capacities (Lao PDR and Thailand)

Objective 2. Support national programs to evaluate elimination models and strategies for implementation and scale-up

- 2.1 Conduct cost benefit analysis of malaria elimination to make the case for domestic investment (Thailand)

Objective 3. Support national malaria programs to generate, analyze, use, and document strategic information

- 3.1. Support the implementation and documentation of the therapeutic efficacy studies (TES) and build capacities in malaria drug resistance (Thailand)
- 3.2. Provide technical assistance to the NMCP in data quality, completeness, timely reporting, analysis of data, and information use (Lao PDR and Thailand)

This report covers Year 1, Associate Award 2 activities in both Lao PDR and Thailand.

1.2 Summary of Results to Date

In this section, we present a summary of results to date for Year 1 below in **Exhibit 1**.

Exhibit 1. Summary of Results to Date

Objectives/Activities	Year 1 Results
1. Strengthening malaria surveillance systems in Thailand and Lao PDR	
1.1. Increase collaborative partnerships and contribute to existing malaria stakeholder committees and working groups (Lao PDR and Thailand)	<ul style="list-style-type: none"> ▪ Q3: Thailand: RTI was invited by the Bureau of Vector Borne Diseases (BVBD) to participate in both the Malaria Elimination Working Group and the newly proposed Malaria Information System Working Group. ▪ Q3: Lao PDR: RTI participated in the malaria partners meeting on June 22, 2016.
1.2. Conduct a work plan consultation of malaria surveillance systems (Lao PDR and Thailand).	<ul style="list-style-type: none"> ▪ Q3: Lao PDR: Operational permit request to conduct work plan consultation being sought. ▪ Q4: Thailand: Completed the work plan consultation and report submitted to the U.S. Agency for International Development on August 31, 2016.
1.3 Secondment of national consultants to support malaria surveillance activities and build local capacities (Lao PDR and Thailand).	<ul style="list-style-type: none"> ▪ Q3: Thailand: Mr. Surasak Sawang (independent consultant) was contracted on May 20, 2016, as the health informatics technical specialist and this role continued into Q4. In the year 2, workplan Mr. Sawang will transition to full time employment and he will continue to provide hands-on technical support to the BVBD.
2. Supporting national programs to evaluate elimination models and strategies of implementation and scale-up	
2.1. Conduct cost benefit analysis of malaria elimination to make the case for domestic investment (Thailand).	<ul style="list-style-type: none"> ▪ Q3: Thailand: Initiated discussions with BVBD and coordinated a visit of RTI's senior health economist (Dr. Jeff Sine) to BVBD on June 30, 2016. ▪ Q4: Under Dr. Sine's leadership work commenced on the data collection for the cost benefit assessment. This work will continue in year 2.
3. Supporting national malaria programs to generate, analyze, use, and document strategic information	

Objectives/Activities	Year 1 Results
3.1. Support the implementation and documentation of TES and build capacities in malaria drug resistance (Thailand)	<ul style="list-style-type: none"> Q1-Q4: RTI contracted Ms. Teresita Prombuth, an independent consultant, to provide technical support and capacity building at BVBD. Q3: Field visits were conducted to the following sites: Ubon Ratchathani Province, Sisaket, Kanchanaburi, and Ranong Province (La-un, Kraburi, Jor Por Low, and Kapoe). Q3: A meeting with the World Health Organization (WHO) malaria technical officer and BVBD was facilitated to review the WHO 2014 TES data Q3: Data entry and analysis of the TES 2013–2015 at BVBD was reviewed Q4: First draft of the TES toolkit was completed and submitted to WHO for review. It will be submitted to USAID for approval in Q1 of year 2.
3.2. Provide technical assistance to the National Malaria Control Program in data quality, completeness, timely reporting, analysis of data, and information use (Lao PDR and Thailand)	<ul style="list-style-type: none"> Q3: Thailand: Eight programmatic datasets were identified, and Inform Asia provided technical assistance identifying key strategic information from those datasets Q3 to Q4: Open and regular communication maintained with BVBD management team

2. Activity Implementation Progress

2.1 Progress Narrative

Objective 1: Strengthen malaria surveillance systems in Thailand and Lao PDR

Activity 1.1. Increase collaborative partnerships and contribute to existing malaria stakeholder committees and working groups (Lao PDR and Thailand)

Thailand specific activities:

In Q1, Inform Asia began managing Ms. Teresita Prombuth, a long-term malaria consultant, who has been providing technical and management support to the Bureau of Vector Borne Diseases (BVBD) on therapeutic efficacy studies (TES) in Thailand since May 2014. She has met regularly with the BVBD and other relevant stakeholders to discuss malaria programming, which will be discussed further under Activity 3.1.

Since Q2 and especially in Q3 and Q4, RTI has been working in close collaboration with the BVBD, the Thai principal recipient of grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), the Thai Ministry of Public Health (MOPH), and other malaria stakeholders, including the World Health Organization (WHO), to support Thailand's malaria elimination efforts. In Q3, The BVBD management team also requested that RTI participate in the Malaria Elimination Technical Group and the newly formed Malaria Information System (MIS) Working Group (Q3), which is chaired by Dr. Nipon Chinanonvet, MD, director of BVBD.

Since Q3, Mr. Surasak Sawang (an independent consultant) has been contracted by RTI as the health informatics technical specialist for Thailand. In addition to being seconded to the BVBD to provide technical support, he represents Inform Asia on the MIS Working Group and has contributed toward several activities, specifically the provision of technical support toward the transfer and integration of malaria software,

data, and information technology from the Electronic Malaria Information System (eMIS) to the Department of Disease Control (DDC). This will be explained in further detail under Activity 1.3.

On September 30, 2016, RTI Senior Director of Global Health, Ms. Felicity Young, visited Thailand to provide management oversight to the Inform Asia team; meet with USAID representatives to provide program updates; and meet with BVBD to meet Dr. Prayuth and Dr. Nipon and touch base on Inform Asia's contributions, working relationships, and potential future collaborations.

Lao PDR-specific activities:

Starting in Q2, monthly partner meetings have been held in Vientiane, Lao PDR, chaired and hosted by WHO, to discuss areas that require additional support and coordination on surveillance. RTI consultant, Dr. Niramong Chanlivong attends these meetings on behalf of RTI.

On June 22, 2016, the acting Chief of Party (COP), Dr. Leopoldo Villegas, also attended the malaria partners meeting in Vientiane, Lao PDR, and presented malaria activities included in Inform Asia's work plan to participating malaria partners. The malaria team from WHO's Vientiane Office chaired the meeting. An additional three technical exchange meetings were conducted on June 23, 2016, with malaria stakeholders, including the Clinton Health Access Initiative, the Asian Development Bank, and the University of California San Francisco to explore areas of synergy and potential collaboration. Follow-up meetings were held remotely via e-mail and/or Skype to share information on activities related to surveillance and monitoring and evaluation.

Activity 1.2. Conduct a work plan consultation of malaria surveillance systems (Lao PDR and Thailand)

In Q2, RTI contracted with Dr. Patricia Graves, a global malaria expert, to lead the RTI-supported work plan consultation of malaria surveillance systems in Thailand and Lao PDR. Dr. Graves worked closely with the acting COP and a local consultant to prepare the work plan consultation in Q3. After a desk review of existing documents, this consultation was conducted in Thailand from May 23 to June 10, 2016,¹ and brought together stakeholders, including BVBD, WHO, Provincial Health Offices, Vector Borne Disease Unit (VBDO), and USAID. Team visits to Ubon Ratchathani and Uthai Thani also were conducted to meet with provincial stakeholders and discuss their experience with the malaria surveillance system and their capacity building needs. The resulting report provided several recommendations on how to address key findings, such as drawbacks, omissions, and duplication in Thailand's surveillance system structure and the malaria control program's ability to report on intervention progress.

The final report was submitted to USAID on August 31, 2016, and included recommendations to improve the malaria surveillance system and better measure progress toward malaria elimination (e.g., how to increase the completeness and timeliness of case investigations, as well as streamline and harmonize the response process).

Activity 1.3. Secondment of national consultant to support malaria surveillance activities and build local capacities (Thailand and Lao PDR)

Thailand-specific activities:

¹ Following government policies in Lao PDR, the work plan consultation was postponed due to the need of an official permit to operate in the country and a memorandum of understanding with the Ministry of Health.

As mentioned under Activity 1.1, Mr. Surasak Sawang was brought on as a national consultant and seconded to the BVBD in May. Mr. Sawang is a Thai national with expertise in information systems, monitoring and evaluation (M&E), and malaria surveillance systems. As part of his consultancy, he is tasked with providing technical support to BVBD with a focus on integration and harmonization of existing malaria databases.

During the reporting quarter, RTI met regularly with the BVBD management team (Dr. Prayuth Sudathip and Dr. Nipon Chichanonvet) to discuss plans to transfer the eMIS to the Information Technology (IT) Center at the DDC within the MOPH. Originally funded by the GFATM, the eMIS was developed by the Center of Excellence for Biomedical and Public Health Informatics at Mahidol University (BIOPHICS) and has been used as a malaria database by both the BVBD and the Bureau of Epidemiology (BoE). While the District Health Offices and Provincial Health Offices report weekly to the BoE, data through the BVBD has generally come from the vertical reporting from the network of malaria clinics and other provincial posts. These multiple reporting channels and use of disparate variables between systems has subsequently resulted in gaps and duplication of data submitted by BVBD and BoE. To accurately assess confirmed cases and effectiveness of responses, malaria data management needs to be consolidated; this is particularly relevant within the context of malaria elimination. There have been progress and efforts made in the past few years to merge the data from these two systems using fuzzy logic reconciliation through a BIOPHICS developed Business Intelligence Software (BI). The weekly reconciliation of these data sets is expected to result in more accurate data and case reporting, eventually resulting in no longer needing to reconcile data weekly.

As a principal designer/developer of the current MIS, Mr. Sawang has extensive experience in strengthening the malaria information system in Thailand. He also has provided substantial support in capacity building to the BVBD in malaria surveillance and information systems. Following a request by USAID, RTI has discussed with BVBD clarifying the specific areas that will require Mr. Sawang's technical support. An action plan was developed jointly with the BVBD to outline this process, which was acknowledged officially by the BVBD in writing at the end of Q4. The plan for transferring eMIS to the DDC IT Center is scheduled for October–November, 2016. In parallel with the transfer of the malaria database systems, Mr. Sawang also will provide technical and management assistance for the development of malaria software to help reduce gaps and minimize data discrepancies in BoE reporting. The actual physical server will be transferred in parallel with the consolidation of all other database systems; completion is expected by the end of January 2017.

On June 24–25, RTI, in collaboration with BVBD, provided a technical assistance facilitator (Mr. Sawang) for two groups participating in a national workshop on the malaria information system². One group included 95 participants and a second had 109 participants; all participants were trained in data entry, quality control, and reporting, and were mentored closely by Mr. Sawang.

Since July 1, 2016, Mr. Sawang has been meeting with the management information system (MIS) Working Group approximately every 2 weeks to discuss the system transfer process, provide technical mentoring to the MIS Working Group, and agree on timelines and feasibility of the transfer. As of this reporting period, the MIS Working Group is in the process of obtaining vendor quotations for transferring the server, while RTI is obtaining quotations for developing the malaria software to reduce gaps and redundancies in BVBD reporting.

² Workshops were funded by the GFATM.

Lao PDR-specific activities:

In Q2, in Lao PDR, an agreement was finalized with the Center for Malaria, Parasitology and Entomology (CMPE) management team. The CMPE's Director, Dr. Bouasy, agreed to review the consultant's terms of reference and to participate in the selection process of the final candidate. RTI was unable to proceed with this activity due to lack of registration in Lao PDR.

Objective 2: Support national programs to evaluate elimination models and strategies of implementation and scale-up

Activity 2.1. Conduct cost benefit analysis of malaria elimination to make the case for domestic investment (Thailand)

RTI, in collaboration with the BVBD, coordinated the June 30, 2016, visit of RTI Senior Health Economist Dr. Jeffrey Sine to Thailand. Dr. Sine's role includes providing senior technical leadership for a cost benefit analysis (CBA) of malaria elimination. Dr. Sine, Mr. Sawang and the acting COP met with USAID to discuss details of the CBA. A follow-up meeting was conducted on July 1, 2016, with the BVBD team and the Inform Asia team, and Dr. Sine had the opportunity to meet with Dr. Prayuth and Dr. Nipon of the BVBD.

As part of this activity, RTI supported the BVBD team to conduct a literature search on health economic assessments. As a result, an extensive reference list has been developed, which includes case studies from several malaria endemic areas around the world.

In Q3, RTI also provided support to the BVBD to prepare an abstract, which has been accepted for Joint International Tropical Medicine Meeting on December 7–9, 2016. Note that with Year 1 funds, RTI registered the new COP and Mr. Sawang, Inform Asia's Health Informatics Consultant, to attend the conference.

On September 8–18 (Q4), Dr. Sine visited Bangkok for the second time to follow up and meet with the team to discuss and agree on the parameters for data collection. During his visit, preparations were also made for a meeting to be held on October 7 (Year 2, Q1) at the BVBD to introduce the CBA to stakeholders and finalize the roles and responsibilities for data collection. The Inform Asia team began collecting data in Q4 and has been working closely with the BVBD to identify malaria experts for input on the tools and for providing secondary data to be used and analyzed for the CBA study. This work is ongoing.

Objective 3: Support national malaria programs to generate, analyze, use, and document strategic information

Activity 3.1. Support the implementation and documentation of the TES and build capacities in malaria drug resistance (Thailand)

TES related activities: RTI took over the management of Ms. Teresita Prombuth (independent consultant) in September 2015 (Q1), so that she could continue to provide technical and management support to TES since February 2014. The studies aim to evaluate the current first-line treatment for uncomplicated *P. falciparum*, a 3-day regimen of artesunate-mefloquine, and a pipeline regimen of dihydroartemisinin-piperaquine and pyronaridine-artesunate, and treatment for uncomplicated *P. vivax*, a 3-day regimen of chloroquine.

Since being contracted by RTI, Ms. Prombuth has provided substantive support to the BVBD TES team, Office of Disease Prevention Control, Vector Borne Diseases Center (VBDC), and VBDCU through training, mentoring, on-site coaching, one-on-one discussions, and various meetings.

Ms. Prombuth's role is to:

- manage the technical support to the BVBD TES team, including co-facilitating the monthly meetings and other ad-hoc meetings;
- provide technical inputs to technical documents (e.g., K13 molecular markers, amendment of TES protocols, and TES monitoring plans); and
- conduct monitoring visits to TES sites.

The following TES sites are active: Kanchanaburi, Prachuap Khirikan, Ranong, Songkla, Yala, Surat Thani, Chumphon, Tak, and Ubon Ratchathani. The TES team has conducted site initiation visits to prepare the sites for TES protocol implementation according to Good Clinical Practice requirements and to deliver supplies and materials necessary for the study. During their regular site visits, the monitoring team ensures that all procedures are being followed according to laboratory procedures and protocols. These activities have strengthened the TES team and study sites' staff by building their capacity in knowledge, abilities, and skills to implement TES and strengthen systems at the malaria clinics.

Data obtained from the TES sites contribute toward updating the national treatment guidelines and generate evidence to support the efficacy of current treatment recommendations, as well as any changes that may be required for future treatment.

In Q2, Ms. Prombuth checked the storage of the informed consent and case report forms, blood slides, and filter papers; she also developed a specimen-tracking log to record all specimens collected. During this reporting period, the BVBD received U.S. Food and Drug Administration approval of pyronaridine-artesunate for TES in Tak province. The consultant also worked with the BVBD TES data entry staff to review the informed consent and case report forms and preliminary analysis of the TES data for 2013–2014 and 2014–2015.

On May 22 (Q3), Ms. Prombuth facilitated a meeting with the WHO Malaria Technical Officer and BVBD to review the WHO 2014 TES data. In addition, she reviewed the data entry and analysis of the TES 2013–2015 at BVBD. Also in Q3, Ms. Prombuth continued supporting the implementation of TES in Thailand. Field visits were conducted to Ubon Ratchathani Province, Sisaket, Kanchanaburi, Ranong Province (La-un, Kraburi, Jor Por Low, and Kapoe), during which Ms. Prombuth checked the storage of the informed consent and case report forms, blood slides, and filter papers (dried blood spots).

In addition to the technical support to the BVBD TES team, Ms. Prombuth has led the development and adaptation of a country-specific TES toolkit developed by WHO. The toolkit will consolidate all of the guidelines needed to conduct efficacy studies, including protocols, inclusion criteria, clinical record forms, consent forms, checklists, and data entry forms. The TES toolkit also will be used in other TES sites managed by WHO; hence, WHO involvement in this activity is critical.

The draft toolkit was completed by the end of Q4 and is now being reviewed by stakeholders (including WHO and the BVBD). The final USAID review is expected by the end of November 2016. Approval rests with USAID and, following their review, the toolkit will be finalized and distributed by the end of Q2 FY17. Prior to the finalization of the toolkit, WHO/Geneva will present an overview of the TES toolkit at the TES regional meeting scheduled for October 24–26, 2016.

Ms. Prombuth's will continue being seconded to the BVBD through December 2016. A dissemination meeting will be held on December 17 (marking the end of the Government-2-Government agreement). The BVBD TES principal investigator, with support from Ms. Prombuth, will jointly facilitate the dissemination meeting. BVBD will

host the meeting, which will include BVBD senior staff, VBDC provincial staff, WHO and nongovernmental organization partners.

Capacity building related activities: In Q2, three BVBD staff (Medical Scientist Ms. Patcharida Na Lampang; Public Health Technical Officer [Practitioner], Mr. Rungniran Sugaram; and Public Health Technical Officer [Professional]), Mr. Theerayot Kob-asa, attended a 6-week training visit called “The Laboratory Training on Molecular Methods for Detection of Genetic Markers Associated with Anti-malarial Drug Resistance” at the U.S. Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, from February 7 to March 27. This training provided a hands-on exercise to laboratory scientists as part of the broader effort to strengthen the network for monitoring the therapeutic efficacy of anti-malarial drugs in the Mekong region, particularly along the Thai-Cambodia border, and to promote continued collaboration between the Thai Ministry of Public Health and U.S. CDC. The three BVBD staff from Thailand participated in this training alongside several United States-based fellow researchers and entomologists. Over the course of the training, the participants extracted over 1,000 blood spot samples, using various techniques to test for genetic markers related to anti-malarial drug resistance. They also obtained a Certificate of Safety Survival Skills consisting of two parts: General Responsibilities and Laboratory Safety.

Lead Research & Bioinformatics Scientist at the CDC in Atlanta, Dr. Eldin Talundzic, visited the BVBD June 3–20 to supervise and provide onsite coaching for K13 molecular training and follow up on the Q2 training that the three BVBD staff participated in at the CDC.

Activity 3.2. Provide technical assistance to the NMCP in data quality, completeness, timely reporting, analysis of data, and information use (Lao PDR and Thailand)

In Year 1, RTI provided technical assistance to the BVBD management team and other personnel on programmatic strategic information. In June, the acting COP identified eight programmatic datasets and provided technical assistance to identify key strategic information from those datasets.

In addition to the above, several meetings were held between RTI and the national malaria programs in Thailand and Lao PDR to further discuss how Inform Asia can support their efforts to monitor data collection, conduct timely data analysis, and use information to inform programming. Open and regular communication will continue over the life of the program.

2.2 Program Achievements

In Q1, activities were focused on preparing the annual work plan and the M&E plan. The program initially considered recruiting a Malaria Program Manager. Following consultations with BVBD and USAID to discuss the needs of BVBD, the recommendation was that someone with a strong technical background be seconded to BVBD to provide mentoring, technical, and communication support. Mr. Sawang, who began working in May 2016, has been particularly instrumental in consolidating collaborative partnerships to existing malaria stakeholder committees and working groups, as well as contributing significantly to building local capacity for improving data quality and completeness.

Meetings and regular communication are ongoing between Inform Asia and the national malaria programs in Thailand and Lao PDR to discuss program implementation, provide updates, as well as discuss how to further provide support for national malaria programs. Following Dr. Graves’ work plan consultation in Thailand, Inform Asia has begun the process of obtaining official permission to conduct the work plan consultation in Lao PDR, which will be implemented using RTI

corporate funds. Discussions for the implementation of this activity in Lao PDR have taken place with the CMPE since Q2.

Preparatory and routine activities

The following section provides a more detailed overview of the activities, by objective, that we initiated or completed during this reporting period. Activities are presented by objective, as they appear in the revised work plan to ensure alignment. A Gantt chart (see ***Exhibit 2***) is provided to illustrate activity status at the end of Q3.

2.3 Implementation Status

Exhibit 2 summarizes the implementation status of the project.

Exhibit 2. Gantt Chart of Activity Status by the End of Year 1

Malaria Associate Award 2 Activities: Year 1 Gantt Chart	YEAR 1												
	Q1			Q2			Q3			Q4			Status
	O	N	D	J	F	M	A	M	J	J	A	S	
Objective 1. Strengthen malaria surveillance systems													
Forge collaborative partnerships with the range of stakeholder and partners							X	X	X	X	X	X	Ongoing
Contribute to existing malaria stakeholder committees and working groups in Thailand and Lao PDR							X	X	X	X	X	X	Ongoing
Conduct work plan consultation of Thai and Lao PDR malaria surveillance system								X	X				Completed ³
Objective 2. Support national programs to evaluate elimination models and strategies of implementation and scale-up													
Conduct cost benefit analysis of malaria elimination									X	X	X	X	Ongoing
Objective 3. Support national malaria programs to generate, analyze, use, and document strategic information													
Support to NMCPs to analyze, interpret, and present the consultation results and preliminary recommendations								X	X	X	X	X	Ongoing
Technical assistance provided to stakeholders/partners in malaria information systems, surveillance, data analysis, and use for programmatic decision making								X	X	X	X	X	Ongoing
Secondment of national consultants to support surveillance activities in Thailand and Lao PDR								X	X	X	x	X	Ongoing
Secondment of consultant to BVBD to support successful TES implementation	X	X	X	X	X	X	X	X	X	X	X	X	Ongoing
Review of TES protocol, supporting documents, and support for development of a Thailand-specific TES toolkit	X	X	X	X	X	X	X	X	X	X	X	X	Ongoing
Site visits and ongoing monitoring and supportive supervision to TES sentinel site staff	X	X	X	X	X	X	X	X	X	X	X	X	Ongoing
Conduct consultative meetings with Thai MOPH, WHO, and other stakeholders to keep them engaged in the TES process	X	X	X	X	X	X	X	X	X	X	X	X	Ongoing
Provide training and mentoring to MOPH staff						X	X	X	X	X	X	X	Ongoing
Develop manuscripts and abstracts to share programmatic and research results									X				Ongoing

³ Completed in Thailand only.

2.4 Implementation Challenges

In Lao PDR, an official permit to operate in the country is required by international non-governmental organizations. This process takes an average of 9 to 10 months and, after this permit is obtained, a memorandum of understanding with the Ministry of Health is also required. RTI appointed Ms. Niramoh Chanlivong (consultant) to support the process to obtain the operational permit. Additionally, on June 22, RTI Operations Manager, Ms. Rebecca Price, visited Lao PDR to better understand the requirements and processes involved in the operational permit. Ms. Price has been working closely with RTI's home office to drive this process.

2.5 M&E Update

The revised M&E plan for Associate Award 2 was submitted to USAID on August 30, 2016, and is under review by the agreement officer's representative. The M&E update below is based on the proposed indicators, as suggested by USAID.

Exhibit 3. M&E Indicators

Indicator	Description & Unit of Measurement	Data Source	Reporting Frequency	Baseline	Year 1 Target	Progress
IR 1. Strengthen malaria surveillance systems in Thailand and Lao PDR						
Number of national malaria program units systematically using information (surveillance, HMIS, M&E) to plan and monitor performance	<p>Use: To demonstrate that technical assistance on surveillance data quality, reporting, case investigation and rapid response strengthened the surveillance systems' ability to produce information and use it for planning and monitoring performance.</p> <p>Description: Number of program units include malaria program branch offices, or management units/departments at headquarters or regional levels (such as, BoE, BVBD, CMPE, as NMCP). Use of information constitutes as written (or computer generated) evidence that data (surveillance, HMIS, M&E) has been transformed into information (e.g. indicators of performance, trend/time analysis through graphs and charts) and are used to assess performance against predefined objectives in program unit reports.</p> <p>Unit: Absolute number</p>	Activity tracking sheet; national program, policy, and advocacy documents	Annually	0	1	1 TA has been provided to BVBD
Sub-IR 1.1: Increased collaboration and coordination among malaria stakeholders						
Number of collaborative malaria technical working groups in which Inform Asia participated in the last 12 months	<p>Use: To track participation in malaria technical working groups</p> <p>Description: Number of collaborative working groups in</p>	Activity tracking sheets; meeting	Annually	0	2	2 1: monthly WHO partner meetings in Laos

Indicator	Description & Unit of Measurement	Data Source	Reporting Frequency	Baseline	Year 1 Target	Progress
	which Inform Asia actively participated in the last 12 months Unit: Absolute number	minutes and presentations				1: MIS working group in Thailand
Sub-IR 1.2: TA for malaria surveillance activities provided						
Number of recommendations from work plan consultations addressing malaria system functions implemented by NMCPs or stakeholders	Use: To monitor implementation of the recommendations from work plan consultations. Description: Number of recommendations produced through the malaria work plan consultation include written descriptions of technical assistance activities or technical content or products that may be implemented or developed to improve malaria surveillance system functions. Unit: Absolute number	Activity tracking sheet, national program or stakeholder documents	Annually	0	7	7 This is the number of recommendation areas included in the Year 2 work plan as a result of the consultation
Sub-IR 1.3: Capacity to collect, analyze, interpret, and use malaria surveillance data increased						
Number of MIS technical products supported in the last 12 months with USG funds	Use: To track technical assistance delivered to improve MIS functions, which are funded for by USG funds Description: MIS technical products include briefs, training materials, manuals, standard operating procedures, modules in MIS platform, or other guidance materials that facilitate collection, management, analysis, and reporting of MIS data. Support includes producing technical content in products as well as providing recommendations that	Activity tracking sheet, MIS program or stakeholder documents	Annually	0	1	1 1 training materials have been developed for MIS functions (e.g. PowerPoint presentation)

Indicator	Description & Unit of Measurement	Data Source	Reporting Frequency	Baseline	Year 1 Target	Progress
	inform development of MIS products. Unit: Absolute number					
IR 2: Support national malaria programs to evaluate elimination models and strategies for implementation and scale-up						
Number of key actionable programmatic findings and/or lessons learned from data analysis, methods, or tools developed by Inform Asia that are available to NMCP staff, managers, decision-makers, and/or stakeholders	Use: To track relevant instances resulting from Inform Asia activities Description: Number of key actionable findings and/or lessons learned that are available to NMCP staff, managers, decision-makers, and/or stakeholders Unit: Absolute number	Activity tracking, project reports	Annually	0	0	Products and findings will be produced in Year 2.
Sub-IR 2.1: Benefit-cost analysis (CBA) of malaria elimination developed and disseminated						
Report on CBA of malaria elimination produced	Use: To track production of the CBA final report Description: Report on the CBA of malaria elimination (Thailand) produced and disseminated to stakeholders. Unit: Absolute number	Inform Asia reports	Annually	0	0	Report will be produced in Year 2.
IR 3: Support national malaria programs to generate, analyze, use, and document SI						
Number of information products produced targeting malaria program managers, researchers, decision-makers, and policy-makers	Use: Track malaria information products produced by Inform Asia activities Description: Information products include curricula; technical guides; reports; policy and other briefs; research papers; peer-reviewed or non-peer-reviewed articles; best practices; success stories; program lessons learned;	Activity tracking sheet	Annually	0	0	Conference abstracts, reports and presentations are planned for Year 2.

Indicator	Description & Unit of Measurement	Data Source	Reporting Frequency	Baseline	Year 1 Target	Progress
	conference abstracts, posters or presentations; and other forms of media. Only information products that are published for dissemination can be counted. Unit: Absolute number.					
Sub-IR 3.1: Implementation and documentation of the therapeutic efficacy studies (TESs) supported						
Number and percentage of TES sites that received at least one monitoring visit in the last 12 months	Use: Track monitored TES sites supported by Inform Asia staff or consultants Description: Number and percentage of TES sites that received at least one monitoring visit in the last 12 months by Inform Asia staff or consultants. Monitoring visits include reviewing TES sites and their current operational and analytical capacity to successfully conduct TES, training, and mentoring of national level MOPH staff in TES protocol; institutional review board submission; good clinical practice; ethics; patient enrollment and follow-up; data entry; data analysis, interpretation, and dissemination; and abstract and manuscript writing. Unit: Absolute number and percentage		Annually	-	9	Sites monitored through TES: Kanchanaburi, Prachuap Khirikan, Ranong, Songkla, Yala, Surat Thani, Chumphon, Tak, and Ubon Ratchathani
Sub-IR 3.2: Capacity to assess malaria drug resistance in Thailand increased						
Number of NMCP or stakeholder staff trained in malaria drug resistance issues in the past 12 months with USG funds	Use: Track training on malaria drug resistance with Inform Asia support Description: Number of NMCP and stakeholders staff trained in	Activity tracking sheet	Annually	0	3	3

Indicator	Description & Unit of Measurement	Data Source	Reporting Frequency	Baseline	Year 1 Target	Progress
	malaria drug resistance in the past 12 months supported with USG funds Unit: Absolute number					3 BVBD staff went to CDC in Atlanta for training
Sub-IR 3.3: Data quality, completeness, timely reporting, analysis, and information use capacities of NMCPs and stakeholders improved						
Number of malaria-related dissemination activities at national, regional, and international events supported with USG funds	Use: To track Inform Asia's dissemination activities Description: Number of malaria-related dissemination activities supported with USG funds Unit: Absolute number	Activity tracking sheet	Annually	0	0	Dissemination activities are planned for Year 2.

3. Management and Administrative Issues

During Q3, Associate Award 2, along with the Leader with Associates Award and Associate Award 1, Inform Asia underwent significant structural change. Most notably, in April 2016, the COP resigned and RTI commenced recruitment for a new COP with malaria expertise to better address program needs. By the end of Q3, a new COP candidate, Dr. Darin Kongkasuriyachai, was submitted to and approved by USAID. Unfortunately, Dr. Kongkasuriyachai is unable to begin work until December 1, 2016, due to her pre-existing work commitments.

With USAID consent, RTI has had two interim acting chiefs of party. RTI Global Health Policy Senior Director, Ms. Felicity Young, is the acting COP until Dr. Darin Kongkasuriyachai commences.

4. Planned Activities for Next Quarter, Including Upcoming Events and Travel

Activities for next quarter will be based on approval of the submitted work plan for Year 2. Anticipated travel for Q1, Year 2, is outlined in **Exhibit 4**.

4.1 Management

- On December 1, 2016, Dr. Darin Kongkasuriyachai will become the new permanent chief of party.
- In October 2016, Surasak (Joe) Sawang was offered and accepted a full-time position with RTI, as the permanent health informatics specialist. He will continue to be the main technical lead for Objective 1.
- From 27 December 2016 to 6 January 2017, Rebecca Price (program operations manager from the RTI home office) will be in country (under Associate Award 1 funding), and she will provide Dr. Kongkasuriyachai with orientation support.
- In January (date to be confirmed) Dr. Darin Kongkasuriyachai will attend Chief of Party training at RTI's home office in the USA.

Objective 1:

Thailand activities

- Ongoing participation by the COP in the BVBD-hosted quarterly Malaria Elimination Technical Working Group.
- Ongoing participation by the COP and health informatics technical specialist in the BVBD-hosted monthly MIS Working Group meetings.
- Ongoing secondment of the health informatics technical specialist to the BVBD to provide technical assistance to support malaria surveillance activities.
- In December 2016, recruitment with commence for a new program officer to work on migrant issues to provide support to the MIS at the provincial level.

Lao PDR activities

- RTI consultant (based in Lao PDR) Dr. Niramonth Chanlivong will continue to participate in the WHO-hosted quarterly national malaria partners' meetings.

Objective 2:

- In collaboration with BVBD, ongoing data collection for the CBA.
- Fielding of the epidemiological assessment in support of the CBA.
- Data analysis and preparation of the cost scenarios will be undertaken.
- New COP and health informatics specialist to attend the Joint International Tropical Medicine Conference December 7-9, 2016, In Bangkok. Dr. Prayuth Sudathi will present a joint BVBD and RTI paper titled *Moving towards Malaria Elimination in Thailand*.

Objective 3:**TES**

- Ongoing provision of technical support to BVBD for TES, including three site visits by the TES consultant
- Finalization and approval by RDMA of the TES toolkit
- RTI's TES consultant (Ms. Tess Prombuth) will attend the 2nd Biregional Meeting of Asia-Pacific Drug Resistance Monitoring Networks, October 24–26, 2016, in Bangkok at the Dusit Thani Hotel. She will co-present the draft TES Toolkit, in partnership with WHO.

Malaria software

- The health informatics technical specialist will continue the development of a malaria software agent application to integrate malaria information.
- In collaboration with BVBD, pilot testing of the new software will be conducted in three sites: Ubon, Sisaket, and Uthai Thani. Findings from the pilot test will be used to revise the software as necessary, and results will continue to be monitored as the malaria software will be implemented in selected hospitals.
- The health informatics technical specialist will provide training on recording and reporting using the malaria online system to staff at central and district levels.

Exhibit 4. Proposed International Travel for Associate Award 2 Q1: Project year 2

Supported by	Traveler	Link to activities and description	Origin	Destination	Trips/days
Associate Award 2	Dr. Jeff Sine	Objective 2: CBA study	Jakarta	Bangkok	October 30 to 8 November
Associate Award 2	Dr. Jeff Sine	Objective 2: CBA study	Jakarta	Bangkok	December 1–14